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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,569	09/09/2003	George Emanuel	KSY 02655 PTUS	3413
32233	7590	10/23/2009	EXAMINER	
STORM LLP BANK OF AMERICA PLAZA 901 MAIN STREET, SUITE 7100 DALLAS, TX 75202			KIM, CHRISTOPHER S	
			ART UNIT	PAPER NUMBER
			3752	
			NOTIFICATION DATE	DELIVERY MODE
			10/23/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/658,569	Applicant(s) EMANUEL, GEORGE	
	Examiner Christopher S. Kim	Art Unit 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 59-66 and 68-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 59-66 and 68-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The reply filed June 15, 2009 is acknowledged.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Applicant elected Invention I, Species A (figures 1-3) in the reply filed on November 4, 2005. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "heating element" recited in claims 68 and 77 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. Claims 59-65, 68-78 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 59 recites "An iodine injection system for injecting iodine into gas flowing through a nozzle for a laser comprising:..." The preamble indicates that the intended use of the iodine injection system is for injecting iodine into a gas flowing through a nozzle for a laser. The preamble suggests that the "gas," "nozzle" and "laser" are not positively recited limitations/elements of the iodine injection system. The preamble appears to be in conflict with the body of the claim which suggests that the nozzle and gas flow are elements within the injection system.

Claim 59 recites the limitation "divergently extending opposed curved walls" in line 9. It appears to be a double inclusion of the "pair of opposed curved walls" recited in line 3.

Claim 59 recites the limitation "a gas flow area" in line 12. It appears to be a double inclusion of the "area for gas flow" recited in line 4.

Claim 59 recites the limitation "a central axis" in line 14. It appears to be a double inclusion of the "central axis" recited line 3.

The term "near" in claim 60 is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is uncertain what distance is defined by the claim.

Claim 60 recites the limitation "the gas flowing through the nozzle" in line 2. There is insufficient antecedent basis for this limitation in the claim. The "gas flowing through the nozzle" is not a positively recited limitation in parent claim 59.

Claim 63 recites the limitation "the iodine" in line 2. There is insufficient antecedent basis for this limitation in the claim. The "iodine" is not a positively recited limitation in parent claim 59.

Claim 70 recites "An iodine injection system for injecting iodine into gas flowing through a nozzle for a laser comprising:..." The preamble indicates that the intended use of the iodine injection system is for injecting iodine into a gas flowing froth a nozzle for a laser. The preamble suggests that the "gas," "nozzle" and "laser" are not positively

recited limitations/elements of the iodine injection system. The preamble appears to be in conflict with the body of the claim which suggests that the nozzle and gas flow are elements within the injection system.

The term "near" in claim 71 is a relative term which renders the claim indefinite. The term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is uncertain what distance is defined by the claim.

Claim 74 recites the limitation "the iodine" in line 2. There is insufficient antecedent basis for this limitation in the claim. The "iodine" is not a positively recited limitation in parent claim 70.

Claim 75 recites the limitation "the carrier gas" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 76 recites the limitation "the carrier gas" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. Claims 59-65, 69-76, 78 are rejected under 35 U.S.C. 102(b) as being anticipated by Pinsley (4,206,426).

Pinsley discloses an injection system comprising:

a nozzle having:

a central axis (fig 1 exhaust arrow);

pair of opposed curved walls (walls above and below nozzle array 22);

the nozzle including:

an inlet (upstream end of converging section 24);

a throat 26;

an exit nozzle portion 30;

at least one injection strut 40, 92;

a kernel region (immediately downstream of throat 26);

a throat 26 at a first end of a nozzle 30, the throat having a sharp corner;

a curved sonic line (resulting from curvature of nozzle 30);

an exit plane 32;

Pinsley discloses the limitations of the claimed invention with the exception of the iodine being injected through the strut 40, 92.

Response to Arguments

7. Applicant's arguments filed June 15, 2009 have been fully considered but they are not persuasive.

Applicant argues that the heating element is shown in figures 4. Figure 4 is directed to non-elected Species B. Species A, figures 1-3 was elected in the response filed November 4, 2005. Are claims 68 and 77 only readable on a non-elected species?

Applicant argues that Pinsley does not show sharp corners in the throat region. Pinsley shows, in figure 1, sharp corners in the throat region.

Applicant argues that Pinsley fails to show a nozzle with an exit body portion configured to have an exit plane with particular characteristics. The recitation “configured such that...” merely requires the capability to perform the functional recitation.

Regarding claim 70, the “wherein” clause is a conditional functional recitation that merely requires the ability to perform. It does not constitute a positively recited limitation.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3752

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Christopher S. Kim/
Primary Examiner, Art Unit 3752

CK